

## Claims

5

1. A sensor arrangement, in particular as part of a reflection light barrier, comprising a carrier (1) on which a photodiode (3), a first light emitting diode (4) for the transmission of a measuring light beam, in particular a pulsed measuring light beam, and a second light emitting diode (5) for the transmission of a reference light beam, in particular a reference light beam pulsed offset in time with respect to the measuring light beam, and a light transmitting housing (6) enclosing the photodiode (3) and the two light emitting diodes (4, 5) are arranged, wherein the second light emitting diode (5) is arranged on the carrier (1) such that the reference light transmitted by it is essentially not incident on the photodiode (3) from the side.

10

15

20

25

2. A sensor arrangement in accordance with claim 1, wherein the photodiode (3) is arranged on a first plane (2a) of the carrier (1) and the second light emitting diode (5) is arranged on a second plane (2b) of the carrier (1).
3. A sensor arrangement in accordance with claim 2, wherein the two planes (2a, 2b) are offset with respect to one another at least by the height (h) of the photodiode (3) or by the height of the second light emitting diode (5).

4. A sensor arrangement in accordance with claim 2, wherein the second light emitting diode (5) is arranged on a higher plane (2b) than the photodiode (3).
- 5 5. A sensor arrangement in accordance with claim 1, wherein a circuit board is provided as the carrier (1).
6. A sensor arrangement in accordance with claim 5, wherein the circuit board (1) is formed in the manner of a sandwich board of at least two  
10 layers.
7. A sensor arrangement in accordance with claim 6, wherein the layers (1a, 1b) of the carrier-board (1) are laminated to one another.
- 15 8. A sensor arrangement in accordance with claim 1, wherein the carrier (1) consists of a material impermeable to light.
9. A sensor arrangement in accordance with claim 1, wherein the housing (6) is formed by an encapsulant of material impermeable to light  
20 such as epoxy resin.
10. A sensor arrangement in accordance with claim 1, wherein the housing (6) is formed with a chamfered wall, namely with a so-called facet (7), in the region of the second light emitting diode (5).
- 25 11. A sensor arrangement in accordance with claim 1, wherein a lens for the focusing of the useful light is arranged in front of the first light emitting diode (4).